



Grant County
PUBLIC UTILITY DISTRICT
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April 30, 2013

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
Mail Code: DHAC, PJ-12
888 First Street, N.E.
Washington, D.C. 20426

**RE: Priest Rapids Hydroelectric Project No. 2114 License Compliance Filing
Article 414 - 2013 Bald Eagle Perch/Roosting Protection Plan annual report**

Dear Secretary Bose,

Public Utility District No. 2 of Grant County, Washington (Grant PUD) respectfully submits to the Federal Energy Commission Regulatory Commission (FERC) its 2013 Bald Eagle Perch/Roosting Protection Plan Annual Report.

On April 10, 2009, Grant PUD filed its Bald Eagle Perch/Roosting Protection Plan (Plan) with FERC. FERC issued an Order on January 19, 2010 approving the Plan pursuant to Article 414 of the Priest Rapids Project. Per FERC's approval of the Plan, Grant PUD is required to provide annual reports to the U.S. Fish and Wildlife Service (USFWS), Washington Department of Fish and Wildlife (WDFW), the Wanapum and FERC by April 30 of each year.

Consistent with the License and modifying and approving Order, the enclosed document has been provided to the USFWS, WDFW and the Wanapum.

Respectfully,

A handwritten signature in blue ink that reads "Julie E. Pyper".

Julie E. Pyper
License Compliance Manager
Public Utility District No. 2 of Grant County, Washington

Bose (LA 414 annual report)
April 30, 2013
Page 2 of 2

Enclosures: Final 2013 Bald Eagle Perch/Roosting Protection Plan Report

Cc: Jessica Gonzales, USFWS
Steve Lewis, USFWS
Pat Verhey, WDFW
Alyssa Buck, Wanapum

**Priest Rapids Hydroelectric Project No. 2114
2013 Annual Report for the Bald Eagle Perch/Roost Protection Plan
Pursuant FERC Article 414**

Behr Turner
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April 2013

Executive Summary

On January 19, 2010, the Federal Energy Regulatory Commission (FERC) approved the bald eagle (*Haliaeetus leucocephalus*) perch/roost protection plan pursuant to Article 414 of the license for the Priest Rapids Hydroelectric Project No. 2114 (Project). Within the 2013 annual report, the Public Utility District No. 2 of Grant County, WA (Grant PUD) is reporting its progress on the implementation activities related to this plan for the period from March 16, 2012 to March 15, 2013. The 2013 annual report pursuant to Article 414 reports daytime eagle-use surveys, communal roost site surveys, nest occupancy and productivity surveys, perch/roost tree protection efforts, an update on riparian planting efforts.

A total of 318 eagles were observed during the project-wide surveys. The eagles appeared to be distributed throughout the Project except in cliff areas where peregrine falcons (*Falco peregrinus*) were frequently observed or where shoreline trees were not present. The survey on February 4, 2013 yielded the greatest single-day, Project-wide survey count of 79 bald eagles. A total of 11 eagles were observed during the three 2012 recreation season eagle surveys, and it is difficult to discern if recreational use has any effect on what areas the eagles use.

A total of four communal roost sites were documented during the surveys. The communal roost sites with the greatest eagle use were Scammon's Landing, where greater than 25 eagles were documented and Wanapum State Park where six eagles were documented. The other two communal roost areas were located at the north end of Quilomene Bar and the trees at the Ginko Petrified Forest Museum at Vantage, WA.

Grant PUD continued assessment of the 13 remaining potential areas for riparian plantings of black cottonwood (*Populus trichocarpa*) by collaborating with the Wanapum and Grant PUD's Cultural Resources Department. As a result, no riparian plantings occurred during this reporting period. An assessment of the survival of the 700 cottonwood cuttings planted in January 2012 resulted in the survival of two cuttings. There are numerous reasons that the planting efforts were not successful and include the following: 1) The cuttings were soaked in water for over two months, but the recommended soaking time is only two weeks; 2) the water froze in the soaking barrels due to a winter storm and freezing temperatures; 3) the unthaw process immediately stimulated new growth when the frozen barrels were taken inside to thaw in late January 2012; and 4) after planting the cuttings with new growth rapidly generating, another winter storm manifested and brought more freezing temperatures. No additional riparian tree wrapping efforts were warranted in this reporting period.

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1.0 Introduction

On January 19, 2010, the Federal Energy Regulatory Commission (FERC) approved the bald eagle (*Haliaeetus leucocephalus*) perch/roost protection plan pursuant to Article 414 of the license for the Priest Rapids Project No. 2114 (Project)¹. FERC's approval of Article 414 requires the Public Utility District No. 2 of Grant County, WA (Grant PUD) to file an annual progress report to FERC, the United States Fish and Wildlife Service (USFWS), and the Washington Department of Fish and Wildlife (WDFW), and that the annual report shall cover the dates of March 16 through March 15 of the following year.

The number of eagles using the Project in 2010–2013 appears to have substantially increased from numbers reported over 10 years ago. Framatome (2003) reported that 10–15 bald eagles used the Project in 2001; however, the late-January 2012 survey resulted in an eagle count in excess of 100 eagles (Turner 2012). Additionally, two active bald eagle nests were documented within the Project in 2011 (Turner 2011). In 2012, golden eagle nesting activity was also discovered (Turner 2012).

Activities related to the bald eagle perch/roost protection plan were implemented in coordination with other plans required by the license for the Project for the 2012 reporting period (March 16, 2010–March 15, 2012). This includes the Wildlife Habitat Management Plan (Article 409); Wildlife Habitat Monitoring and Information and Education Plan (Article 410); Transmission Line Avian Collision Protection Plan (Article 411); Rare, Threatened, and Endangered Plant Monitoring Plan (Article 413); Programmatic Agreement (Article 416); the Memorandum of Agreement between Grant PUD and the Wanapum (Article 417); Priest Rapids Recreation Resource Management Plan (Article 418); the Shoreline Management Plan (Article 419); and the provisions of the Historic Properties Management Plan.

2.0 Materials and Methods

2.1 Eagle Surveys

Grant PUD conducted daytime eagle-use surveys, communal roost tree surveys, and nest surveys from March 16, 2012 to March 15, 2013.

2.1.1 Day-Use Surveys

Eleven daytime eagle-use surveys were conducted within the Project (i.e., Wanapum Reservoir and Priest Rapids Reservoir) to document areas of eagle use within the Project. These surveys were boat-based and each survey was composed of a single and complete pass of Wanapum and Priest Rapids reservoirs. Surveys were initiated after sunrise and concluded before sunset. Three surveys occurred during the summer recreational time period of June 1–September 30, 2012, and eight surveys occurred during the winter migration period (i.e., November 15, 2012–March 15, 2013). Eagle-use surveys recorded the date, weather conditions, surveyors, Priest Rapids or Wanapum pool, survey start time, and survey end time. Additionally, each eagle observation had the following data recorded: 1) observation time, 2) number observed, 3) species (i.e., bald, golden, unknown), 4) maturity (i.e., mature, juvenile, unknown), 5) Geographic Positioning System (GPS) point (NAD 84, Decimal Degrees), 6) location description, 7) perch structure/soaring (i.e., on ground, perch pole, tree, rock, cliff, soaring), 8) nearby beaver activity (Y, N, N/A), 9) tree wrap status (Y, N, N/A), and 10) observation notes.

¹ 130 FERC ¶ 62,054 (2010)

Eagle species were identified as bald, golden, or unknown. Eagle maturity status was identified as mature, juvenile, or unknown. Bald eagles exhibiting a white head and tail were classified as mature. Juvenile bald eagles were classified by variable amounts of white on their belly, back, and wings. Golden eagles (*Aquila chrysaetos*) possessing a solid brown body, black tail, and golden feathering on their nape and upperwing coverts were classified as mature. Juvenile golden eagles were classified by a dark body with white bases on their outer secondary feathers and inner primary feathers with a tail that might be white with a thick or black terminal band (Alsop 2001).

2.1.2 Communal Roost Site Surveys

Grant PUD conducted eagle communal roost surveys January–February 2013. Communal roost site eagle surveys were initiated 30 minutes before sunset and continued past civil twilight until it was too dark for the observers to see with the aid of high-quality binoculars (e.g., 12 power magnification, 45 mm objective). Communal roost sites were defined as trees with three or more eagles perched in them. Trees that were classified as communal roost sites had the following data recorded: date, survey start time, time of sunset, time of civil twilight, observation time, count of eagles, species, GPS point, location description, and a date/time stamped photograph when possible.

2.1.3 Nest Surveys

Eagle nest surveys were performed to monitor nest occupancy, activity, and productivity in a manner consistent with WDFW protocols. In this report, Grant PUD reported the complete 2012 bald eagle nest survey results; however, only nest occupancy was reported for the 2013 nest survey results. In general, the methodologies for eagle nest surveys are as follows:

Eagles which were observed to carry sticks and grasses were followed within the Project to locate the nest.

Nest occupancy surveys were conducted the last week of February through the first week of March in good weather. A minimum of three hours were spent at each known nest site in the early morning hours unless eagle occupancy was established at arrival. If eagle occupancy was established at arrival, the information was recorded, and the surveyor vacated the area to avoid disturbing the nesting pair of eagles. If nest occupancy was not determined on the first survey, a second nest occupancy survey was conducted.

Eagle nest activity surveys were conducted from April 7–21 to document whether an adult eagle is incubating young or occupying the site.

Eagle nest productivity surveys were conducted June 15–25 with the goal of observing juvenile eagles.

2.2 Eagle, Perch Tree, Roost Time, and Nest Protection Efforts

Grant PUD implemented measures to protect eagle perch, roost, and nesting trees through wire exclusion and site management plans. Eagle roost and nest trees were wrapped with exclusion wire (i.e., 36-inch-high, 4-inch-x-2-inch, 14 gauge welded wire fencing) to protect the trees from beaver damage. The installation of exclusion wire on eagle day-use perch trees was prioritized according to nearby beaver activity, nearby nesting eagles, the tree species, or the trees that were identified as communal roost trees. Grant PUD also collaborated with WDFW and the USFWS to develop a site management plan for an active bald eagle nest sited on Grant-PUD-owned

property. As part of managing and supporting eagles that nest within or adjacent to the Project, Grant PUD maintains 17 article perch, roost, and nesting structures located throughout the Project.

2.3 Riparian Plantings

Grant PUD identified 23 potential riparian planting areas intended to provide future eagle perch and roost trees in the Article 414 Plan approved by FERC. During the initial cultural assessment with the Wanapum and the Licensee's Cultural Resources Department, 10 of the original 23 riparian planting sites were removed from consideration due to their cultural significance (Turner 2011). In 2012–2013, Grant PUD continued cultural assessment at the remaining 13 potential riparian planting areas with its Cultural Resources Department and the Wanapum. Additionally, Grant PUD is also exploring alternative planting sites that would be compatible with Memorandum of Agreement between Grant PUD and the Wanapum (Article 417) and the provisions of the Historic Properties Management Plan. Grant PUD plans to employ a water jet stinger planting methodology developed by the Western Forestry and Conservation Association for cottonwood planting (WFCA 2010) for future black cottonwood (*Populus trichocarpa*) plantings. Grant PUD is also researching the potential to augur holes and plant potted cottonwoods in soils where the water jet stinger is not feasible. In September 2012, Grant PUD also assessed the survival of the 700 cottonwoods planted at the Airstrip Property in January 2012.

3.0 Results & Discussion

3.1 Eagle Surveys

Grant PUD conducted daytime eagle-use surveys, communal roost tree surveys, and nest surveys from March 16, 2012 to March 15, 2013.

3.1.1 Day-Use Surveys

Grant PUD preformed 11 Project-wide, day-use eagle surveys between June 1, 2011 and March 15, 2012. A total of 318 eagles were observed during the 11 surveys (Table 1). The Project-wide distribution of the 318 eagle observations was presented in Figure 1. The eagles appeared to be distributed throughout the project except in cliff areas where peregrine falcons (*Falco peregrinus*) were frequently observed or where shoreline trees were not present. The survey on February 4, 2013 yielded the greatest single-day, Project-wide survey count of 79 eagles. All 79 eagles were identified as bald eagles. The lowest single-day, project-wide survey counts recorded were September 4, 2012 when one eagle was observed. Cumulatively, the 318 eagles counted during the 2013 reporting period were slightly less than the 359 eagles counted during the 2011 reporting period (Turner 2011) and the 374 counted in 2012 reporting period (Turner 2012).

Eagle use during the summer recreation period (i.e., June–September) was low and sparse (Table 1; Figure 1). A total of 11 eagles were observed during the three 2012 recreation season eagle surveys. The breeding adults were observed near their nests, perched in thick-canopy, shaded trees or at known foraging areas. Two juvenile bald eagles were observed within the Project during the recreation season surveys. Due to the low numbers of eagles observed during the summer recreational period, it is difficult to discern if recreational use has any effect on what areas the eagles use (Figure 1).

Eagle use of the project was classified by the activities of perching and soaring. The perching activity was further refined by the structure of which the eagles perched. Cumulatively, 10% of

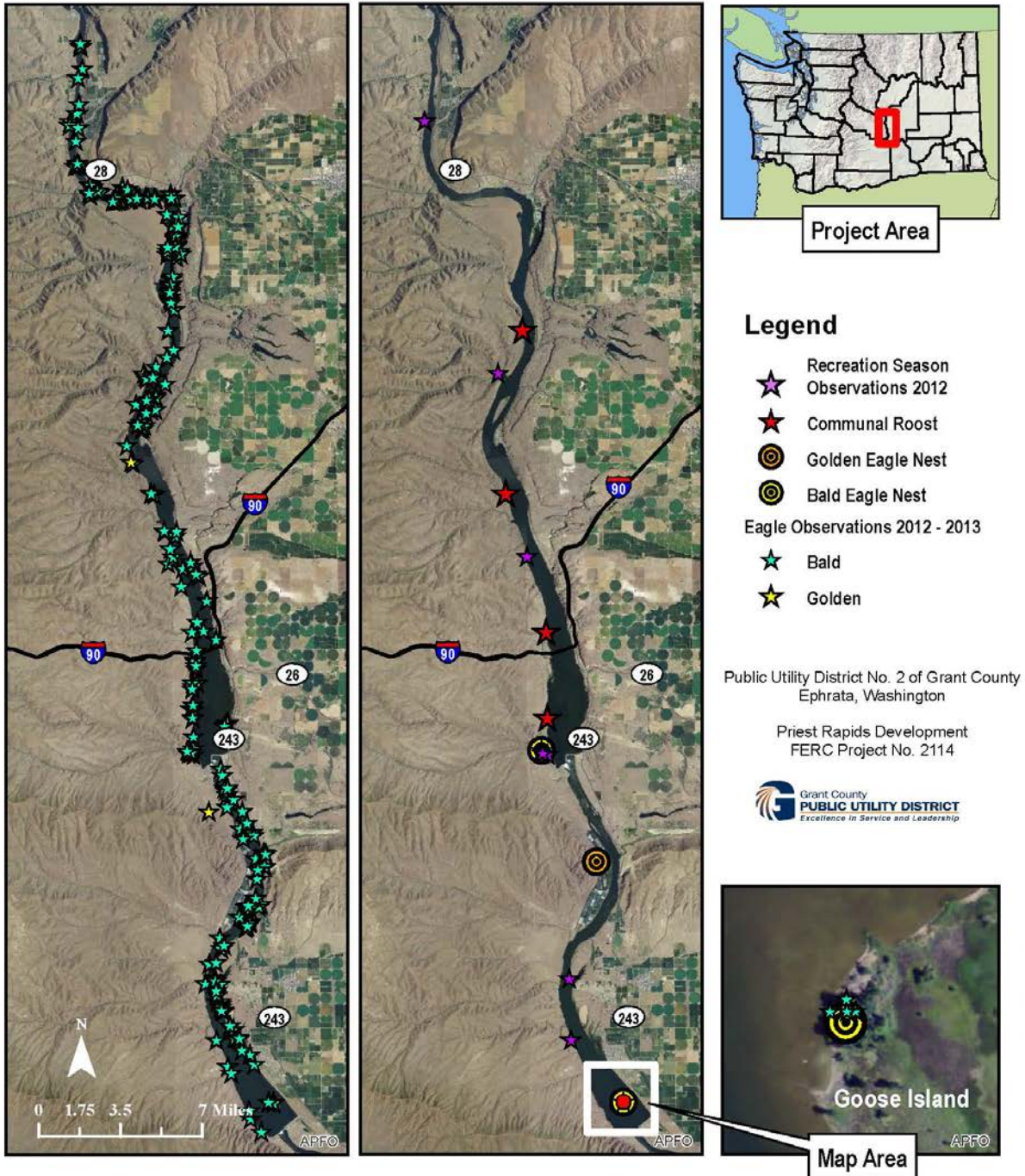
the bald eagles and 36% of the golden eagles were recorded as soaring (Figure 2, Figure 3). Cumulative Article 414 observation data suggests that trees were the most frequent perch structure observed within the Project with 78% of all bald eagles and 43% of all golden eagles observed to be perched within trees. Cliff habitat composes a large portion of shoreline habitat within the Project, and 6% of bald eagles and 14% of golden eagles were observed to be perched upon cliffs (Figure 2). Little variation was observed between the 2012-2013 bald eagle perching and soaring data and the cumulative bald eagle perching and soaring data presented in Figure 2. In general, golden eagles appeared to prefer cliff habitat (Figure 3). All seven golden eagle observations documented soaring golden eagles during the 2012-2013 reporting period, and the cumulative golden eagle perching and soaring data suggested that the golden eagles were more prevalent around the cliff areas where they were observed to be soaring and perching on the cliffs, rocks, ground, and trees (Figure 3).

Table 1 The Priest Rapids Project eagle survey counts conducted for June 1, 2012– March 15, 2013.

Reservoir	Date	Bald Eagles		Golden Eagles		Reservoir Sum	Survey Sum
		Mature	Juvenile	Mature	Juvenile		
Priest Rapids	6/8/2012	1	1	0	0	2	5
Wanapum		2	1	0	0	3	
Priest Rapids	7/6/2012	0	2	0	0	2	5
Wanapum		3	0	0	0	3	
Priest Rapids	9/4/2012	0	0	0	0	0	1
Wanapum		0	0	1	0	1	
Priest Rapids	11/27/2012	1	4	0	0	5	21
Wanapum		5	11	0	0	16	
Priest Rapids	12/14/2012	4	4	0	0	8	21
Wanapum		10	3	0	0	13	
Priest Rapids	12/28/2012	3	9	1	0	13	35
Wanapum		10	11	1	0	22	
Priest Rapids	1/8/2013	6	5	0	0	11	47
Wanapum		15	21	0	0	36	
Priest Rapids	2/4/2013	6	21	0	0	27	79
Wanapum		19	33	0	0	52	
Priest Rapids	2/11/2013	2	15	0	0	17	55
Wanapum		10	28	0	0	38	
Priest Rapids	2/26/2013	1	5	0	0	6	26
Wanapum		4	16	0	0	20	
Priest Rapids	3/5/2013	5	4	0	0	9	23
Wanapum		4	9	0	1	14	
Column Totals		111	203	3	1	318	318

Eagle Use Areas

Day Use, Communal Roost & Nest Areas



This map/data was created for informational, planning, reference and guidance purposes only. Grant PUD makes no warranty, expressed or implied related to the accuracy or content of these materials. April 2013

Figure 1. 2012-2013 daytime use observations, daytime use during the 2012 recreation season, 2013 communal roosting sites, and eagle nesting sites within the Priest Rapids Project, mid-Columbia River, WA.

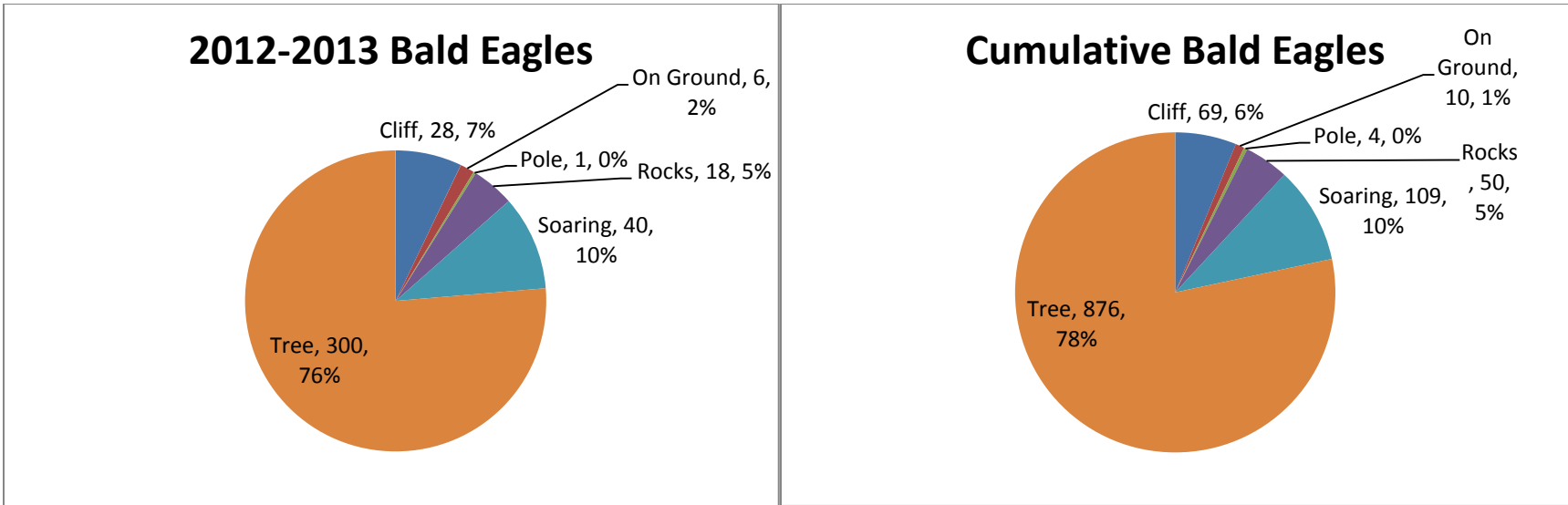


Figure 2. 2012-2013 report period and cumulative (i.e., February 2010-March 2013) bald eagle behavior and habitat use data collected within the Priest Rapids Project, mid-Columbia River, WA

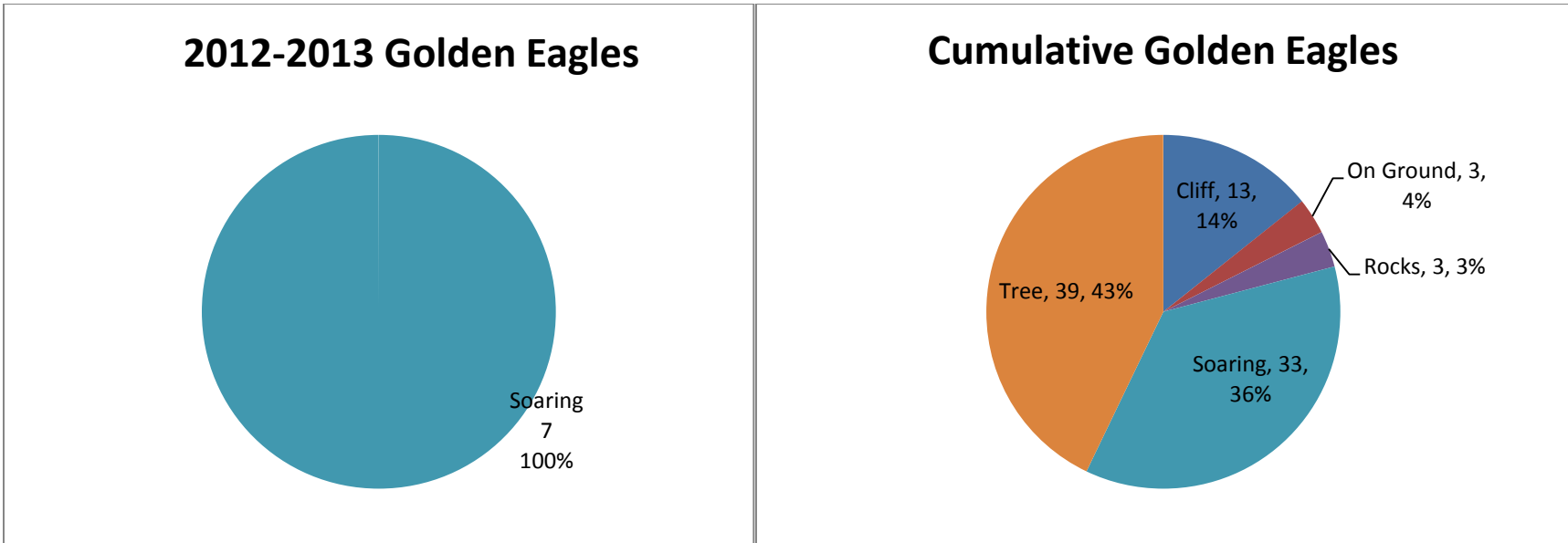


Figure 3. 2012-2013 report period and cumulative (i.e., February 2010-March 2013) golden eagle behavior and habitat use data collected within the Priest Rapids Project, mid-Columbia River, WA.

3.1.2 Communal Roost Surveys

A total of three communal roost surveys were conducted for the 2013 report period during the peak of eagle use (i.e., late-January through mid-February; Table 1). The communal roost surveys occurred on January 8, February 11, and February 26, 2013 (Table 2). Two communal roost surveys were conducted on Wanapum Reservoir and one survey was conducted on Priest Rapids Reservoir. In total, four communal roost sites were documented during the surveys (i.e., north end of Quilomene Bar, Scammon's Landing, Ginko Museum, and the Wanapum State Park Swimming Area; Figure 1). The communal roost sites with the greatest eagle use were Scammon's Landing, where greater than 25 eagles were documented, and Wanapum State Park, where 6 eagles were documented (Table 2). The 17 raptor nesting, roosting, and perching structures remained enacted. However, the structures do not appear to function as roosting sites, nesting sites or perching sites.

Table 2. The 2013 eagle communal roost site survey data.

Priest Rapids Pool/ Wanapum Pool	Date	Sunset	Civil Twilight	Survey Start Time	Observation Time	Eagle (n)	Bald/ Golden/ Unknown	Mature/ Juvenile/ Unknown	GPS Northing	GPS Westing	Location Description
Wanapum Pool	1/8/2013	16:29	17:03	15:59	16:20	16	Bald	3 Mature, 13 Juveniles	47.0398	-120.0239	Scammon's Landing
Wanapum Pool	1/8/2013	16:29	17:03	15:59	16:37	5	Bald	5 Juveniles	46.9538	-119.9881	Ginko State Park Museum
Wanapum Pool	1/8/2013	16:29	17:03	15:59	16:51	6	Bald	1 Mature, 5 Juveniles	46.9008	-119.9875	Wanapum State Park Swimming Area
Wanapum Pool	2/11/2013	17:17	17:49	16:47	17:25	1	Golden	Juvenile			Flying up Tarpiscan Creek (Possible Roost Area up Drainage)
Wanapum Pool	2/11/2013	17:17	17:49	16:47	17:40	4	Bald	Juvenile	47.1410	-120.0078	North End of Quilomene Bar (Cottonwoods)
Wanapum Pool	2/11/2013	17:17	17:49	16:47	17:53	>25	Bald	Both	47.0398	-120.0239	Scammon's Landing
Priest Rapids Pool	2/26/2013	17:40	18:11	17:10	None	N/A	N/A	N/A	N/A	N/A	Birds flying north and upriver of Wanapum Dam

3.1.3 Nest Survey Results

Grant PUD has two active bald eagle nests within the Project, and a golden eagle nest was discovered adjacent to the Project in 2012. The bald eagle nests are identified as WDFW Bald Eagle Nest Territory 1703 (Wanapum Pool Right Bank/Johnson Creek/Getty's Cove) and Bald Eagle Nest Territory 1820 (Priest Rapids Pool/Goose Island). The nest within Territory 1703 was Nest 2 (i.e., 1703-2) has produced a young bald eagle for three consecutive years (i.e., 2010-2012). Nest 1703-2 was surveyed on March 5, 2013, and the nest was active with an adult observed to be displaying incubation activity. One adult was perched near the nest, and the other adult was incubating (Appendix A).

The nests within WDFW Bald Eagle Nest Territory 1820 were Nest 1 (1820-1) for 2010, Nest 2 (1820-2) for 2011, and Nest 3 (1820-3) for 2012. Nest 1 was unsuccessful in 2010, and the top of the nest tree broke off in January 2011 which ultimately destroyed Nest 1. Nest 2 was first documented on March 3, 2011, and the nest was not successful in 2011. In 2012, the eagles built Nest 3; however, the eagles continued to nest in Nest 2. The productivity of the 1820 Nest-2 was unknown in 2012. Due to the tree foliage and height of the nest, it is difficult to observe this nest during the nest productivity surveys. On March 5, 2013, both adult eagles were observed at the 1820-3 site. One adult appeared to be incubating in Nest 3, and the other adult eagle was observed on the shoreline below the nest (Appendix A).

The Sentinel Gap golden eagle nest site is also difficult to observe and survey. On March 26, 2012, two golden eagles were observed to be perched at a nest site north of the Nest 483-1. Because the eagles were clearly perched on a nest, it was reported as a new nest (Nest 483-2). However, as the survey season progressed, the golden eagles were not observed at this site again. On April 19, 2012, one golden eagle was observed to be soaring on the thermals of Sentinel Gap. No additional golden eagle observations and activities were documented at the nest sites in 2012. On March 3, 2013, no golden eagles were observed near any nest sites on the cliffs of Sentinel Gap on the U.S. Army Yakima Training Center, and Nest 483-1 could not be observed anymore. (Appendix A).

3.2 Eagle Perch Tree, Roost Tree, and Nest Protection Efforts

During the 2013 reporting period, Grant PUD did not wrap any trees for beaver protection. Grant PUD proactively and aggressively wrapped trees during the 2010-2012 reporting periods and did not discover a need for tree wrapping during the 2013 reporting period.

Grant PUD continued its implementation of the 2012–2016 bald eagle site management plan for the Grant PUD-owned property known as The Cove. The site management plan was separate document that was jointly developed by the USFWS, WDFW, and Grant PUD, thus the site management plan was not presented in this report.

3.3 Riparian Plantings

Grant PUD continued cultural assessment at the remaining 13 potential riparian planting areas with its Cultural Resources Department and the Wanapum. Additionally, Grant PUD is also exploring alternative planting sites that would be compatible with Memorandum of Agreement between Grant PUD and the Wanapum (Article 417) and the provisions of the Historic Properties Management Plan. Many of these areas are culturally sensitive, and Grant PUD is respecting the Memorandum of Agreement with the Wanapum.

Grant PUD assessed the survival of the 700 cottonwoods planted at the Airstrip Property in January 2012. In September 2012, only two of the 700 cottonwood cuttings were discovered to have survived. The cottonwood cuttings arrived on November 18, 2011. They were immediately put in water to soak for two weeks per WPCA (2010) recommendations. Unfortunately, the water froze in the barrels due to a winter storm. In January 2012, the barrels were taken inside a warehouse to thaw in preparation for planting. Unfortunately, the portion of the cuttings that were not incased in ice immediately started to generate new growth in the warm, inside temperatures. As a result, the cuttings were immediately busted out of the ice and planted at the Airstrip Site. The ideal soak time for cuttings is two weeks per WPCA (2010) recommendations, but these cuttings soaked for over two months, and they were frozen in ice. Furthermore, after they were planted, another winter storm brought freezing temperatures may have great affected survival of the cuttings since fresh growth was present too.

In the future, Grant PUD plans to collect a limited number of local cuttings in early February, soak them for two weeks, and plant them prior to the end of February (pending winter storm warnings) to further evaluate the timing and success of future riparian planting efforts via the cutting methodology. Another planting option Grant PUD is researching and discussion with the Wanapum and the Cultural Resources Department is the ability to auger holes and plant potted black cottonwoods.

4.0 Summary

The numbers of bald eagles using the Project have increased over the last decade. Based upon surveys conducted in the early 2000's to 2012, the increase in the number of bald eagles using the Project was seven fold. Observation data suggested that bald eagles select shoreline areas with mature trees while golden eagles tend to prefer the cliff areas. Cumulative data, which were collected from February 2010-March 2013, enumerated 1,118 bald eagles and 91 golden eagles. Additionally, the greatest single-day eagle survey counts for the year have repeatedly occurred in the later part of January or early February. Golden eagles continue to be present in the project, but not in large numbers.

There are three eagle nests within or adjacent to the Project. Nest 1703-2 (located at The Cove) has successfully fledged a young bald eagle for three consecutive years. The bald eagles nesting on Goose Island (Nest 1820-2) seemed to be repeatedly unable to successfully hatch or fledge a young eagle. However, it appears they may have fledged a young in 2012. A darker bird was observed within the nest, but many ravens were present, the tree foliage obstructs the view, and the observers weren't confident the observation was of a juvenile eagle. Grant PUD plans to continue monitoring the golden eagle nest at Sentinel Gap (Nest 483-1). In 2012, two golden eagles were observed at a nest (Nest 483-2), but they were never observed at this nest area again. In 2013, the golden eagles appeared absent from Sentinel Gap nesting area.

Grant PUD plans to direct future tree protection and planting efforts in areas of eagle nesting, roosting, foraging areas, and daytime perching as needed. Future tree protection efforts are planned to be directed in response to beaver activity at known areas of eagle use. Grant PUD will continue to collaborate with the Wanapum and Cultural Resources Department in the selection of future black cottonwood planting areas and methodologies.

List of Literature

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- Framatome ANP. 2003. Terrestrial Habitat Assessment Priest Rapids Project FERC No. 2114 Final Report. Public Utility District No. 2 of Grant County, WA. Ephrata, WA.
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- Public Utility District No. 2 of Grant County (Grant PUD). 2010. Priest Rapids Hydroelectric Project No. 2114 2010 Annual Report for the Bald Eagle Perch/Roost Protection Plan Pursuant FERC Article 414. Ephrata, WA.
- Puget Sound Energy (PSE). 2010. Settlement Agreement Article 512 Bald Eagle Night Roost Surveys, Season One Results: November 2009–February 2010. Baker River Hydroelectric Project FERC No. 2150. Puget Sound Energy. Bellevue, WA.
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- Turner, B. 2012. Priest Rapids Hydroelectric Project No. 2114 2012 Annual Report for the Bald Eagle Perch/Roost Protection Plan Pursuant FERC Article 414. Public Utility District No. 2 of Grant County. Ephrata, WA.
- Western Forestry and Conservation Association (WFCA). 2010. Restoration of Disturbed Sites with Native Plants: An Integrated Approach. June 14–17, 2010. Wenatchee, WA.

Appendix A
Bald Eagle Nest Survey Reports for 2011 & 2012

Bald Eagle Territory # 1703 Wanapum Pool Right Bank

Year	Nest	Early Season Observation	Late Season Observation	Season Summary	Observer/Affiliation
2010	2	2 Adults, Feeding Young	60: Successful. 1 Young	1 Young	Behr Turner/Grant PUD
2011	2	2 Adults, Incubating	60: Successful. 1 Young	1 Young	Behr Turner/Grant PUD

2012 Occupancy/Productivity Observations

Please use the codes at the bottom of the page to record nest observations in the spaces below. Blank lines are for new nests. Locations of new nest locations can be reported using GPS coordinates and datum, or shown on the reverse map or a separate custom map.

Observer/Affiliation Behr Turner

Observer/Affiliation _____

Observer/Affiliation _____

Observer/Affiliation _____

Early Season Surveys
Nest Occupancy Surveys: February 21 - March 8 in Good Weather
Nest Productivity Surveys: April 7 - 21

NEST #	Date (MM / DD)		NEST COND	#DET	LIFESTAGE 1-4			BEHAVIOR 1-4			OCCOBS	
1703-2	2	28	R	1	A				I			80
1703-2	4	18	R	1	A				PN			80
1703-2	5	3	R	1	A	A	F		PN	P	PN	60-1

Late Season Surveys
Nest Productivity Surveys: June 15 - 25

Date (MM / DD)	NEST COND	#DET	LIFESTAGE 1-4			BEHAVIOR 1-4			PRODOBS

Use the Following Space to:

- (1) Describe new nests (please provide tree species and/or nest type and location, nest height, aspect, landowner information, directions to the site, etc.)
- (2) Update and expand on descriptions of previously reported nests.
- (3) Note other conditions that don't fit into the form, such as occupancy by another species.

Nest Condition: N = New; R = Repaired; U = Disrepair;
RM = Remnant

Lifestage: A = Adult; S = Subadult; J = Juvenile; N = Nestling;
D = Downy; F = Feathered; FL = Fledgling; E = Egg

Behavior: BG = Begging; BR = Brooding; CP = Copulating;
CS = Courtship; D = Defensive; F = Flying; H = Hunting;
I = Incubating; N = Nest Building; P = Perching;
PN = Perched in Nest; T = Tending Young; V = Vocalizing

Occupancy Observation (OCCOBS) Code

1	Occupancy Unknown (visit during nonbreeding season)
2	Occupied, adult/subadult pair
3	Occupancy Unknown (repaired nest considered occupied by Postupalsky)
4	Single bird/nest unrepaired, or pair not near known nest site
5	Occupied, activity unknown
6	Occupied, active (breeding)
7	Occupied, inactive
8	Unoccupied (no birds, nest unrepaired)

Productivity Observation (PRODOBS) Code

50	Productivity unsuccessful or nest empty
60	Productivity successful, # of young known
70	Productivity successful, # of young unknown
80	Productivity unknown, adult obstructing view

OCCOBS/PRODOBS Code

9	Destroyed
10	Not located
11	Not checked

Bald Eagle Territory # 1703 Wanapum Pool Right Bank

Year	Nest	Early Season Observation	Late Season Observation	Season Summary	Observer/Affiliation
2010	2	2 Adults, Feeding Young	60: Successful. 1 Young	1 Young	Behr Turner/GCPUD
2011	2	2 Adults, Incubating	60: Successful. 1 Young	1 Young	Behr Turner/GCPUD
2012	2	1 Adult, Incubating	60: Successful. 1 Young	1 Young	Behr Turner/GCPUD

2013 Occupancy/Productivity Observations

Please use the codes at the bottom of the page to record nest observations in the spaces below. Blank lines are for new nests. Locations of new nest locations can be reported using GPS coordinates and datum, or shown on the reverse map or a separate custom map.

Observer/Affiliation Behr Turner

Observer/Affiliation _____

Observer/Affiliation _____

Observer/Affiliation _____

Early Season Surveys Nest Occupancy Surveys: February 21 - March 8 in Good Weather Nest Productivity Surveys: April 7 - 21							Late Season Surveys Nest Productivity Surveys: June 15 - 25													
NEST #	Date (MM / DD)	NEST COND	#DET	LIFESTAGE 1-4			BEHAVIOR 1-4			OCCOBS	Date (MM / DD)	NEST COND	#DET	LIFESTAGE 1-4			BEHAVIOR 1-4			PRODOBS
1703-2	3 / 5	R	1	A			I			2										

Use the Following Space to:

- (1) Describe new nests (please provide tree species and/or nest type and location, nest height, aspect, landowner information, directions to the site, etc.)
- (2) Update and expand on descriptions of previously reported nests.
- (3) Note other conditions that don't fit into the form, such as occupancy by another species.

Nest Condition: N = New; R = Repaired; U = Disrepair; RM = Remnant

Lifestage: A = Adult; S = Subadult; J = Juvenile; N = Nestling; D = Downy; F = Feathered; FL = Fledgling; E = Egg

Behavior: BG = Begging; BR = Brooding; CP = Copulating; CS = Courtship; D = Defensive; F = Flying; H = Hunting; I = Incubating; N = Nest Building; P = Perching; PN = Perched in Nest; T = Tending Young; V = Vocalizing

Occupancy Observation (OCCOBS) Code	
1	Occupancy Unknown (visit during nonbreeding season)
2	Occupied, adult/subadult pair
3	Occupancy Unknown (repaired nest considered occupied by Postupalsky)
4	Single bird/nest unrepaired, or pair not near known nest site
5	Occupied, activity unknown
6	Occupied, active (breeding)
7	Occupied, inactive
8	Unoccupied (no birds, nest unrepaired)

Productivity Observation (PRODOBS) Code	
50	Productivity unsuccessful or nest empty
60	Productivity successful, # of young known
70	Productivity successful, # of young unknown
80	Productivity unknown, adult obstructing view

OCCOBS/PRODOBS Code	
9	Destroyed
10	Not located
11	Not checked

**Bald Eagle Territory # 1703
Wanapum Pool Right Bank**



Nest #	Zapped	Nest Description
1703-2	No	Bald Eagle Nest at The Cove LAT 46.8803 LONG -119.9927 Legal Description: T16-ON R23-OE S18

**Bald Eagle Territory # 1820
Priest Pool – Goose Island**



Nest #	Zapped	Nest Description
1820-2	No	Bald Eagle Nests on Priest Pool – Goose Island LAT 46.6622 LONG -119.9912 Legal Description: T14-ON R23-OE S34
1820-3	No	

Golden Eagle Territory # AQCH 483 Sentinel Gap – Yakima Training Center

Year	Nest	Early Season Observation	Late Season Observation	Season Summary	Observer/Affiliation
2012	1	0 Adults	0 Adults	Unsuccessful	
2012	2	2 Adults	0 Adults	Unsuccessful	

2012 Occupancy/Productivity Observations

Please use the codes at the bottom of the page to record nest observations in the spaces below. Blank lines are for new nests. Locations of new nest locations can be reported using GPS coordinates and datum, or shown on the reverse map or a separate custom map.

Observer/Affiliation Behr Turner/GCPUD

Observer/Affiliation _____

Observer/Affiliation Pat Wyena, SR/ GCPUD

Observer/Affiliation _____

Early Season Surveys Nest Occupancy Surveys: February 21 - March 8 in Good Weather Nest Productivity Surveys: April 7 - 21							Late Season Surveys Nest Productivity Surveys: June 15 - 25																																	
NEST #	Date (MM / DD)		NEST COND	#DET	LIFESTAGE 1-4			BEHAVIOR 1-4			OCCOBS	Date (MM / DD)	NEST COND	#DET	LIFESTAGE 1-4			BEHAVIOR 1-4			PRODOBS																			
	MM	DD			1	2	3	4	1	2					3	4	1	2	3	4																				
483-2	3	26	N	2	A	A			PN	PN										2																				
483-1	4	5	U	0																	1																			
483-1	4	19	U	1	A				F																															
483-1	5	22	U	0																																				

- Use the Following Space to:
- Describe new nests (please provide tree species and/or nest type and location, nest height, aspect, landowner information, directions to the site, etc.)
 - Update and expand on descriptions of previously reported nests.
 - Note other conditions that don't fit into the form, such as occupancy by another species.

Note: As the nesting season progressed in 2012, it appears Nest 483-2 may have likely been both golden eagles at the nest of other cliff-nesting bird species. These birds were not observed in the area again.

No nesting activity was observed at Nest 483-1, but a golden eagle was observed in the area.

Nest Condition: N = New; R = Repaired; U = Disrepair; RM = Remnant

Lifestage: A = Adult; S = Subadult; J = Juvenile; N = Nestling; D = Downy; F = Feathered; FL = Fledgling; E = Egg

Behavior: BG = Begging; BR = Brooding; CP = Copulating; CS = Courtship; D = Defensive; F = Flying; H = Hunting; I = Incubating; N= Nest Building; P = Perching; PN = Perched in Nest; T = Tending Young; V = Vocalizing

Occupancy Observation (OCCOBS) Code		Productivity Observation (PRODOBS) Code	
1	Occupancy Unknown (visit during nonbreeding season)	50	Productivity unsuccessful or nest empty
2	Occupied, adult/subadult pair	60	Productivity successful, # of young known
3	Occupancy Unknown (repaired nest considered occupied by Postupalsky)	70	Productivity successful, # of young unknown
4	Single bird/nest unrepaired, or pair not near known nest site	80	Productivity unknown, adult obstructing view
5	Occupied, activity unknown	OCCOBS/PRODOBS Code	
6	Occupied, active (breeding)	9	Destroyed
7	Occupied, inactive	10	Not located
8	Unoccupied (no birds, nest unrepaired)	11	Not checked

Golden Eagle Territory # AQCH 483 Sentinel Gap – Yakima Training Center

Year	Nest	Early Season Observation	Late Season Observation	Season Summary	Observer/Affiliation
2012	1	0 Adults	0 Adults	Unsuccessful	
2012	2	2 Adults	0 Adults	Unsuccessful	

2013 Occupancy/Productivity Observations

Please use the codes at the bottom of the page to record nest observations in the spaces below. Blank lines are for new nests. Locations of new nest locations can be reported using GPS coordinates and datum, or shown on the reverse map or a separate custom map.

Observer/Affiliation Behr Turner/GCPUD

Observer/Affiliation _____

Observer/Affiliation Pat Wyena, SR/ GCPUD

Observer/Affiliation _____

Early Season Surveys Nest Occupancy Surveys: February 21 - March 8 in Good Weather Nest Productivity Surveys: April 7 - 21											Late Season Surveys Nest Productivity Surveys: June 15 - 25																				
NEST #	Date (MM / DD)		NEST COND	#DET	LIFESTAGE 1-4				BEHAVIOR 1-4				OCCOBS	Date (MM / DD)	NEST COND	#DET	LIFESTAGE 1-4				BEHAVIOR 1-4	PRODOBS									
483-1	3	5	U	0																	8										

- Use the Following Space to:
- (1) Describe new nests (please provide tree species and/or nest type and location, nest height, aspect, landowner information, directions to the site, etc.)
 - (2) Update and expand on descriptions of previously reported nests.
 - (3) Note other conditions that don't fit into the form, such as occupancy by another species.

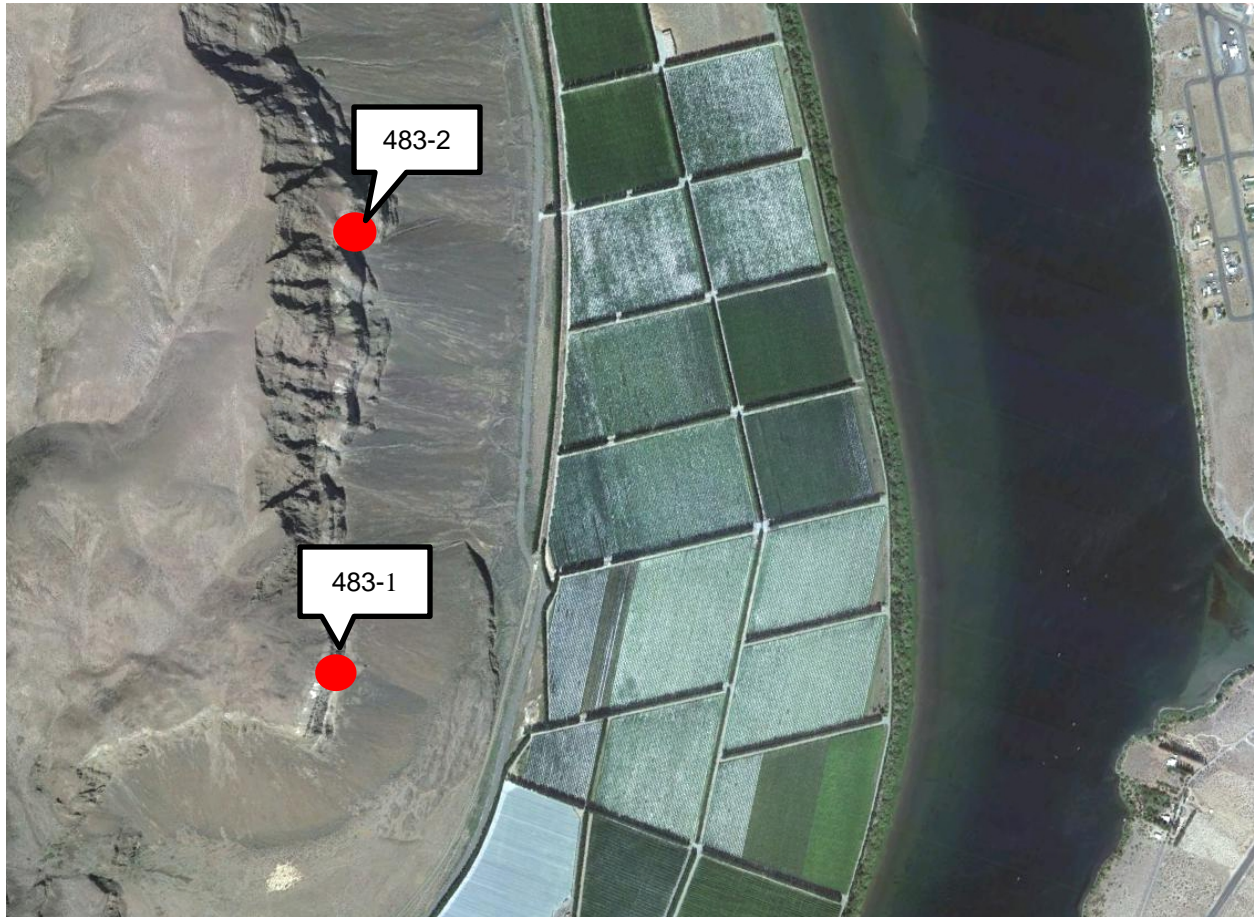
Nest Condition: N = New; R = Repaired; U = Disrepair; RM = Remnant

Lifestage: A = Adult; S = Subadult; J = Juvenile; N = Nestling; D = Downy; F = Feathered; FL = Fledgling; E = Egg

Behavior: BG = Begging; BR = Brooding; CP = Copulating; CS = Courtship; D = Defensive; F = Flying; H = Hunting; I = Incubating; N= Nest Building; P = Perching; PN = Perched in Nest; T = Tending Young; V = Vocalizing

<p>Occupancy Observation (OCCOBS) Code</p> <ul style="list-style-type: none"> 1 Occupancy Unknown (visit during nonbreeding season) 2 Occupied, adult/subadult pair 3 Occupancy Unknown (repaired nest considered occupied by Postupalsky) 4 Single bird/nest unrepaired, or pair not near known nest site 5 Occupied, activity unknown 6 Occupied, active (breeding) 7 Occupied, inactive 8 Unoccupied (no birds, nest unrepaired) 	<p>Productivity Observation (PRODOBS) Code</p> <ul style="list-style-type: none"> 50 Productivity unsuccessful or nest empty 60 Productivity successful, # of young known 70 Productivity successful, # of young unknown 80 Productivity unknown, adult obstructing view <p>OCCOBS/PRODOBS Code</p> <ul style="list-style-type: none"> 9 Destroyed 10 Not located 11 Not checked
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**Golden Eagle Territory # AQCH 483
Sentinel Gap – Yakima Training Center**



Nest #	Zapped	Nest Description
483-2	No	Golden Eagle Nest on Sentinel Gap (Yakima Training Center) LAT 46.8160 LONG -119.9479 Legal Description: T15-ON R23-OE S04
483-1	No	Golden Eagle Nest on Sentinel Gap (Yakima Training Center) LAT 46.8086 LONG -119.9448 Legal Description: T15-ON R23-OE S09